



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,087	01/30/2006	Chad Munro	8932.1091-999	7522
20583	7590	09/17/2007		
JONES DAY 222 EAST 41ST ST NEW YORK, NY 10017			EXAMINER WOODALL, NICHOLAS W	
			ART UNIT 3733	PAPER NUMBER
			MAIL DATE 09/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,087	<b>Applicant(s)</b> MUNRO ET AL.	
	<b>Examiner</b> Nicholas Woodall	<b>Art Unit</b> 3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>06/29/2007</u> . | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3733

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on 571-272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NWWW



EDUARDO C. ROBERT  
SUPERVISORY PATENT EXAMINER

### **DETAILED ACTION**

1. This action is in response to applicant's amendment received on 06/27/2007.

#### ***Claim Objections***

2. Claim 4 is objected to because of the following informalities: the claim states, "...has a further transverse borehole...". The examiner believes the claim should state, "...the distal half of the intramedullary pin further includes a transverse borehole..."

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 7, 9, 13, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Chemello (U.S. Patent 6,077,264).

Regarding claims 1 and 21, Chemello discloses a device comprising an intramedullary pin and a bone plate. The intramedullary pin includes a longitudinal axis, a proximal end, and a distal tip. The proximal half of the pin includes at least one borehole passing through the pin transverse to the longitudinal axis. The at least one borehole defines a transverse borehole axis. The bone plate is attached to the proximal end of the pin with a length extending towards the distal end of the intramedullary pin and ends proximally above the borehole in the pin. The bone plate is further capable of contacting the greater trochanter during use. The bone plate further includes an angled

Art Unit: 3733

tab, wherein the tab is capable of being dimensioned wherein the center of gravity of the tab lies on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle  $\beta$  relative to a plane defined by the transverse borehole axis and longitudinally axis of the intramedullary pin, wherein the angle  $\beta$  is between 0 and 100 degrees or 0 and  $-100$  degrees. Regarding claim 7, Chemello discloses a device wherein the angle  $\beta$  is capable of being between 40 and 50 degrees. Regarding claim 9, Chemello discloses a device wherein the bone plate has a circular borehole and that the proximal end of the intramedullary pin has a cylindrical elevation corresponding thereto, so that the bone plate may be disposed about the elevation. The plate has a circular borehole for a screw to pass to fix the bone plate to the intramedullary pin. A broad definition of the word cylinder can be, "a solid bounded by a closed generalized cylinder and two parallel planes ([mathworld.wolfram.com/Cylinder.html](http://mathworld.wolfram.com/Cylinder.html)), which does not require the cylinder to be circular. Therefore, the intramedullary pin has a non-circular cylindrical elevation or prism at the proximal end, so that the bone plate may be disposed about the elevation. Regarding claim 13, Chemello discloses a device wherein the tab extends around the medullary pin at an angle  $\alpha$  between 10 and 200 degrees.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chemello (U.S. Patent 6,077,264).

Regarding claim 6, Chemello discloses the invention as claimed except for the bone plate and the intramedullary pin being one piece. With regard to the bone plate and the intramedullary pin being a unitary structure, it is noted that Chemello discloses a device comprising a bone plate and an intramedullary pin that are rigidly secured together as a single unit. Therefore, the constituent parts are so combined as to constitute a unitary whole or structure. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding claim 16, Chemello discloses the invention as claimed except for the center of gravity and the transverse borehole axis can be projected onto any cross-sectional area taken orthogonal to the longitudinal axis of the pin, wherein an angle beta between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the bone plate of the device of Chemello wherein an angle beta between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

7. Claims 1-8, 13, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264).

Regarding claim 1, Stedtfeld discloses a device comprising an intramedullary pin. The intramedullary pin includes a longitudinal axis, a proximal end, and a distal tip. The proximal half of the pin includes at least one borehole passing through transverse to the longitudinal axis of the pin and defines a transverse borehole axis. Regarding claim 4, Stedtfeld discloses a device wherein the distal half of the intramedullary pin has a transverse borehole passing through the pin. Regarding claim 5, Stedtfeld discloses a device wherein the distal half of the intramedullary pin includes at least two transverse grooves. Regarding claim 8, Stedtfeld discloses a device wherein the proximal half of the intramedullary pin includes a second transverse borehole. Stedtfeld fails to disclose the device further comprising a bone plate attached to the proximal end of the intramedullary pin. Chemello teaches a device includes a bone plate that includes an angled tab and a center of gravity that is attached to the proximal end of an intramedullary pin in order to bring fragments of bone together (column 2 lines 4-9). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld to further include a bone plate attached to the proximal end of the intramedullary pin in view of Chemello in order to bring fragments of bone together.

Further regarding claim 1, the combination of Stedtfeld and Chemello disclose a device wherein the angled tab is capable of being dimensioned wherein the center of gravity of the tab lies on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle  $\beta$  relative to a plane defined by the transverse borehole axis and longitudinally axis of the

Art Unit: 3733

intramedullary pin, wherein the angle beta is between 0 and 100 degrees or 0 and -100 degrees.

Regarding claim 6, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the bone plate and the intramedullary pin being one piece. With regard to the bone plate and the intramedullary pin being a unitary structure, it is noted that the combination Stedtfeld and Chemello disclose a device comprising a bone plate and an intramedullary pin that are rigidly secured together as a single unit. Therefore, the constituent parts are so combined as to constitute a unitary whole or structure. In re Larson, 144 USPQ 347 (CCPA 1965).

Regarding claim 7, the combination of Stedtfeld and Chemello discloses a device wherein the angle beta is capable of being between 40 and 50 degrees.

Regarding claim 16, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the center of gravity and the transverse borehole axis can be projected onto any cross-sectional area taken orthogonal to the longitudinal axis of the pin, wherein an angle beta between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees. It would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the bone plate of the combination of Stedtfeld as modified by Chemello wherein an angle beta between the projection of the center of gravity and the projection of the transverse borehole axis is between -40 and -50 degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art,



Art Unit: 3733

discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264) further in view of Pennig (U.S. Patent 5,356,410).

Regarding claim 14, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the bone plate having at least one perforation. Pennig teaches a device comprising a bone plate attached to an intramedullary pin wherein the bone plate includes at least one perforation in order to allow bone screws to pass through the bone plate and into the bone (column 2 lines 38-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld modified by Chemello wherein the bone plate includes at least one perforation in view of Pennig in order to allow bone screws to pass through the bone plate and into the bone.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264) further in view of Seidel (U.S. Patent 4,858,602).

Regarding claim 18, the combination of Stedtfeld and Chemello disclose the invention as claimed except for the bone plate having an angled tab with a pair of arms extending toward the distal end of the intramedullary pin. Seidel teaches a device comprising an intramedullary pin and a bone plate, wherein the bone plate includes a plurality of flexible arms in order to support fractured bone segments (column 4 lines 9-

Art Unit: 3733

43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld modified by Chemello wherein the bone plate includes an angled tab with a pair of flexible arms in view of Seidel in order to support fractured bone segments.

10. Claims 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stedtfeld (DE 198 29 228 C1) in view of Chemello (U.S. Patent 6,077,264) further in view of Seidel (U.S. Patent 4,858,602) further in view of Pennig (U.S. Patent 5,356,410).

Regarding claims 17, 19, and 20, the combination of Stedtfeld, Chemello, and Seidel disclose the device as claimed except for the angled tab of the bone plate to include a plurality of perforations. Pennig teaches a device comprising a bone plate attached to an intramedullary pin wherein the bone plate includes an angled tab with a plurality of perforations in order to allow bone screws to pass through the bone plate and into the bone (column 2 lines 38-46). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Stedtfeld modified by Chemello further modified by Seidel wherein the angled tab of the bone plate includes a plurality of perforations in view of Pennig in order to allow bone screws to pass through the bone plate and into the bone.

11. Claims 1-3, 9, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aginsky (U.S. Patent 4,227,518) in view of Chemello (U.S. Patent 6,077,264).

Art Unit: 3733

Regarding claim 1, Aginsky discloses a device comprising an intramedullary pin and a bone plate attached to the proximal end of the intramedullary pin. The intramedullary pin includes a proximal end, a distal tip, and a longitudinal axis. The bone plate includes an angled tab, wherein the tab is capable of being dimensioned wherein the center of gravity of the tab lies on a radius of a cross-sectional area of the intramedullary pin taken orthogonally to the longitudinal axis of the pin and encloses an angle  $\beta$  relative to a plane defined by the transverse borehole axis and longitudinally axis of the intramedullary pin, wherein the angle  $\beta$  is between 0 and 100 degrees or 0 and -100 degrees. Regarding claim 9, Aginsky discloses a device wherein the bone plate has a circular bore and the proximal end of the intramedullary pin has a cylindrical elevation corresponding thereto, so that the bone plate may be disposed about the elevation. Regarding claim 11, Aginsky discloses a device wherein the cylindrical elevation of the intramedullary pin has an external thread. Regarding claim 12, Aginsky discloses a device further comprising a nut with an internal thread corresponding to the external thread of the cylindrical elevation. Aginsky fails to disclose the device having at least one transverse borehole in the proximal half of the intramedullary pin. Chemello teaches a device comprising a bone plate and an intramedullary pin wherein the intramedullary pin has at least one transverse borehole in the proximal half of the intramedullary pin in order to insert a transverse screw through the intramedullary pin (column 4 lines 49-54). It would have been obvious to one having ordinary skill in the art at the time the invention was made to manufacture the device of Aginsky with a

Art Unit: 3733

transverse borehole in the proximal half of the intramedullary pin in view of Chemello in order to insert a transverse screw through the intramedullary pin.

***Response to Arguments***

12. Applicant's arguments filed 06/27/2007 have been fully considered but they are not persuasive. The applicant's argument that the Chemello references and the Aginsky reference do not disclose a device having a bone plate with the characteristics specified in the claims is not persuasive. Claim 1 states, ...wherein the bone plate includes an angled tab configured..., claim 18 states, ...wherein the angled tab is configured..., and claim 21 states, ...wherein the angled tab is configured..., all these claims functionally recite the characteristics of the plate. Therefore, the references only need to be capable of performing the functionally recited elements of the claims. Furthermore, the bone plates of the references are capable of being rotated about the intramedullary pin and the examiner believes that the bone plates can be rotated to a point where the center of gravity lies on a radius of a projected cross-sectional area of the intramedullary pin wherein an angle  $\beta$  between the transverse borehole axis and the longitudinal axis of the intramedullary pin is between 0 to 100 degrees or 0 to -100 degrees, which would meet all the structural and functional requirements of the claim. The applicant's argument that it would not be obvious in view of *In re Aller*, 22 F.2d 454 (C.C.P.A. 1955) is not persuasive. As discussed above the examiner believes that the references disclose a device wherein an angled tab of the bone plate is capable of being positioned so that the center of gravity lies on a radius of a projected cross-sectional area of the intramedullary pin wherein an angle  $\beta$  between the transverse borehole axis and the

Art Unit: 3733

longitudinal axis of the intramedullary pin is between 0 to 100 degrees or 0 to -100 degrees. Therefore, the examiner believes it would be an obvious matter of design choice, since it has been held that where the general conditions of a claim are disclosed in the prior art, i.e. the ranges from 0 to 100 degrees or from 0 to -100 degrees, discovering the optimum or workable ranges, i.e. the ranges from 40 to 50 degrees or -40 to -50 degrees, involves only routine skill in the art.

### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas Woodall whose telephone number is 571-272-5204. The examiner can normally be reached on Monday to Friday 8:00 to 5:30 EST..